SIDEWALKS

1. Width:

There will be a new 5' sidewalk throughout the corridor, except for areas adjacent to St. John's College High School where the sidewalk will be 6'.

2. Material:

Exposed aggregate finish for the entire 1.7 mile corridor.

- Use of porous rubber pavement with exposed aggregate finish near existing trees to minimize root disturbance.

- Use of exposed aggregate concrete along Oregon Avenue otherwise.

3. Layout:

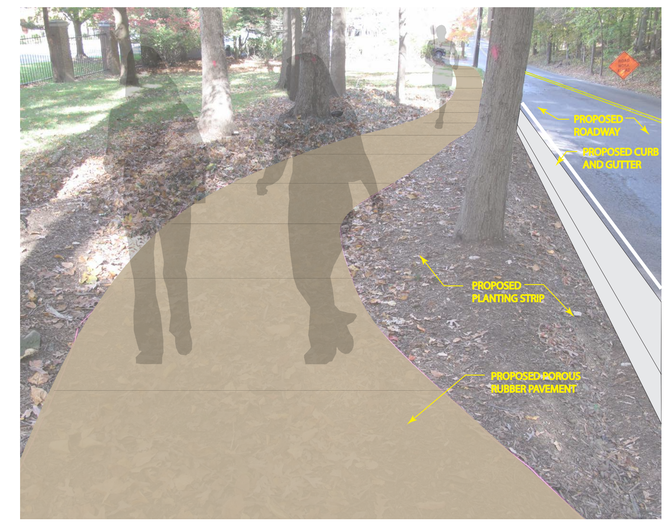
New sidewalk in the ROW.

- Curb abutted sidewalk from St. John's College High School to Nebraka Avenue.

- Detached sidewalk from Nebraska Avenue to Western Avenue unless existing trees require curb abutted sidewalk.

Typical condition where porous rubber pavement will be used to protect trees

Before



After

Examples of exposed aggregate finish

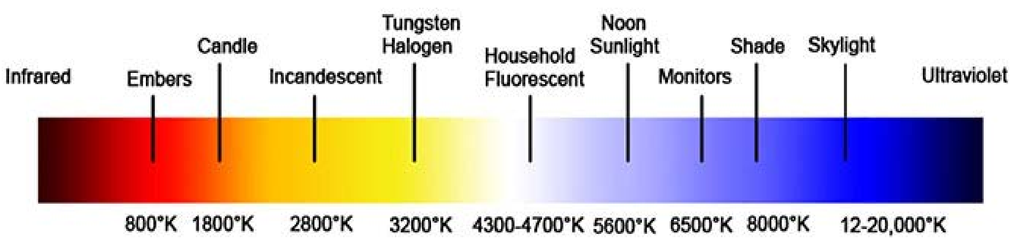
Example of exposed aggregate concrete sidewalk

Example of porous rubber pavement with exposed aggregate finish

CORRIDOR LIGHTING

The design will improve illumination for public safety and light pollution reduction

- Energy efficient LED (3,000k) lighting will replace High Pressure Sodium Lighting.
- Full cut-off fixtures will be used to reduce light trespass.
- Modern fixtures that maximize light distribution towards the roadway will be used.



A 3000K (warm color) LED light will be used instead of the Standard DDOT LED of 4000k (cool color). The color temperature chart above shows the comparison of color tones used for lighting.

High Pressure Sodium
(Currently Used)

LED
(Proposed Light)

Very inexpensive	Relatively Expensive
Commonly used because of efficiency and optical control	Becoming industry standard due to improving technology
Short working life (15,000 hours) High maintenance	Long life span (50,000 watt hours)
High energy consumption	Low energy consumption
Contains mercury	Non toxic material used in manufacturing
Slow start up speed (several minutes)	Quick start up speed (2 seconds)

EXISTING TREES

1. The roadway construction will preserve the majority of the existing trees in the ROW (94% of existing trees). This was achieved by:

   - narrowing and realigning the roadway.
   - meandering the sidewalk to minimize disturbance.
   - use porous rubber pavement around existing trees to remain.

2. The loss of some trees is unavoidable:

   - Approximately 60 trees will be removed. 50% of those trees are considered to be in poor condition or are already dead. The design team worked with the National Park Service (NPS) and/or the Urban Forestry Division (UFD) in determining health and condition of existing trees.

3. Removal of trees is part of tree management which includes:

   -Removing invasive trees in Rock Creek Park near Oregon Avenue.
   - Removing trees that are a liability because of current condition: either dead or dying.
   - Removing trees that have been damaged due to overhead wire trimming and have little chance for survival.

Several clusters of large tress provide a woodland effect

Significant stand-alone trees exist throughout Oregon Avenue

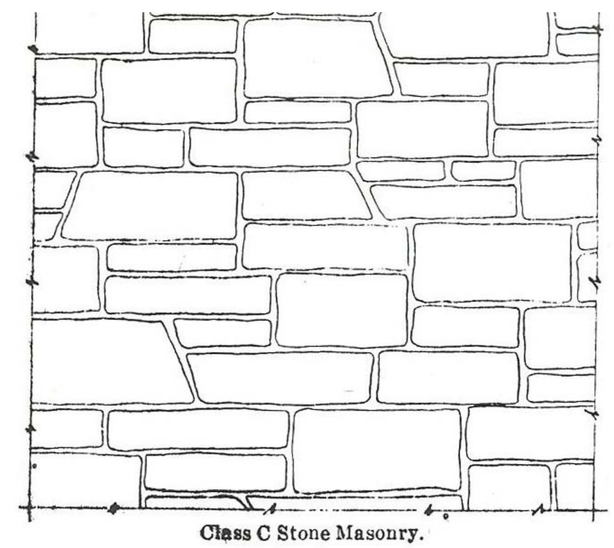
RETAINING WALLS

1. The use of walls has been minimized by narrowing the roadway, and slighly shifting the roadway layout away from existing features to remain.

2. The new bridge, copings, and walls will be decorated with an ashlar stone veneer finish. This architectural treatment relates to existing structures in Rock Creek Park.

Length of Retaining Walls:	150 Linear Feet (Over 18" Height)
Length of Copings:	440 Linear Feet (Less than 18" Height)

Example of existing conditions needing retaining walls



Example of proposed architectural treatment (ashlar stone veneer) for wall structures along Oregon Avenue.

NEW BRIDGE DESIGN

1. The new bridge opening will allow the 50 year rainstorm to pass under the bridge. This will prevent the frequent flooding of the roadway.

2. The elevation of the new bridge and the adjacent roadway will remain relatively the same to minimize disturbance to the park.

3. The current bridge (technically a box-culvert) prevents upstream fish movement. The new bridge does not have a concrete bottom, which will allow upstream fish passage under the bridge.

4. The architectural treatment for the bridge and adjacent walls will include ashlar stone veneer. Roadway railings are included as part of the bridge parapet to lessen the height of the wall and improve views of the park from the bridge.

Before **Before**

After **After**

STORMWATER MANAGEMENT (SWM)

Stormwater runoff captures pollutants from impervious surfaces and carries them into a drainage system and evantually into local streams. To mitigate this, the District has implemented green infrastructure practices to protect waterways and outfalls. Projects such as Oregon Avenue are part of a comprehensive solution to treat stormwater runoff and control erosion by incorporating green infrasturucture as part of the roadway design.

The roadway design integrates green infrastructure solutions such as:

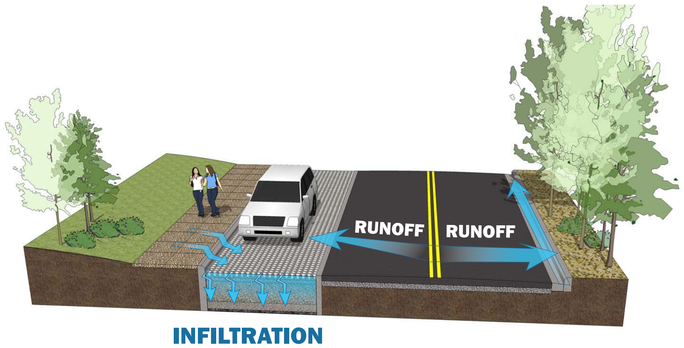
- Bioretention planters and bioretention swale that includes plant material, mulch, planting media (a mix of soil, sand, and compost), and stone layers that capture metals, nutrients, and bacteria. Rainwater is held in the planting beds until it infiltrates into the ground or evaporates.

- Permeable paving systems on Oregon Avenue provide a hard surface for parking and allow runoff to infiltrate into a system of subbase layers. Pollutants are filtered through the pavement and base layers, and stormwater is stored in underlying stone layers until it percolates into the soil below.

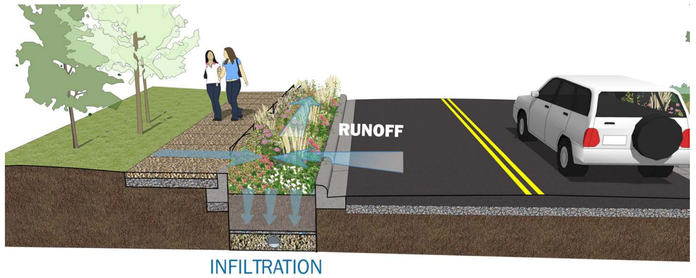
- Preservation of existing trees is important because of the benefits they provide to urban living, such as
  - Improved air quality
  - Tempered local climate
  - Energy Conservation
  - Creating habitat for plant and animals
  - Reducing stormwater runoff and erosion by intercepting precipitation and increasing likelihood of evapotransportation

Uncontrolled runoff rain events in Oregon Ave.

Current erosion problems at drainage outfalls in Rock Creek Park



Typical permeable paving in parking lanes



Typical bioretention planter between sidewalk and roadway curb